

Subj : [1/m 1/26/93] Lyme Disease:. Distilled Wisdom (19/28).XYZ

TICKS, LYME DISEASE, and YOU

LYME DISEASE

Lyme disease is an illness caused by the spirochete bacteria, *Borrelia burgdorferi*, which are transmitted to man and animals by tick bites. Although not all ticks carry the disease, in some areas as many as 90% of the ticks can be infected. The disease gets its name from the town of Lyme, Connecticut, where it was first described in 1975. Many feel if it were not for AIDS, Lyme disease would be the number one infectious disease threat in the United States today.

There were an estimated 3200 reported cases of Lyme disease in New York State in 1989 and an estimated 7000 reported cases nationally. To date 45 states have reported cases. The states of New York, Massachusetts, Connecticut, Rhode Island, and New Jersey account for the majority of cases. Cases from other parts of the country have increased significantly during 1989. It is estimated that as many as 50,000 cases have gone unreported or undiagnosed.

SYMPTOMS AND TREATMENT

In about 60% of the cases, a characteristic rash or lesion called erythema migrans develops. It begins a few days to a few weeks after the bite of an infected tick. The rash generally looks like an expanding red ring with a clear center, but can vary from a reddish blotchy appearance to red throughout. Sometimes there are two or more lesions. Unfortunately, in those patients who never get a rash, the diagnosis can be difficult. At about the same time that the rash develops, flu-like symptoms may appear along with headache, stiff neck, fever, muscle aches and general malaise.

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The later complications of Lyme disease are quite severe. Most common is arthritis, usually of the large joints (e.g., knees, hips, shoulders). Other complications include meningitis and other neurological problems such as numbness, tingling and burning sensations in the extremities, severe pain, loss of concentration, memory loss, confusion, loss of confidence, withdrawal, depression, fatigue, (often extreme and incapacitating), and Bell's palsy (loss of control of one side of the face). Cardiac symptoms include heart palpitations and irregular heart beat. Shortness of breath, dry mouth, voice changes, and difficulty swallowing can occur. Eye symptoms include conjunctivitis, double vision, and loss of vision. Remember, some patients do not get the rash and progress directly to these later symptoms. Symptoms, including pain are intermittent and changing, occurring in any combination and lasting from a few days to several months and possibly years.

It is important to seek medical attention if any of these symptoms appear, especially after being bitten by a tick or visiting an area where Lyme disease is common. Timely treatment with antibiotics (within a few days of symptoms appearing) will increase chances of recovery and may lessen the severity of any later symptoms. If ignored, the early symptoms may disappear, but more serious problems can develop months to years later. Chronic Lyme disease, because of its diverse symptoms, is particularly difficult to diagnose. Treatment for later stages is more difficult and is often less successful, sometimes requiring several months of intravenous antibiotic therapy.

THE DEER TICK

Ixodes dammini is responsible for most of the cases of Lyme disease in the northeastern and northcentral United States. These ticks are found in grassy areas (including lawns), and shrubby and woodland habitats, even on warm winter days. The adult ticks (about the size of a sesame seed) feed mostly on white-tailed deer but will also attack other mammals including man. If infected, they can transmit the Lyme disease spirochete to their hosts.

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After engorging, adult female ticks drop to the ground to lay several thousand eggs. The larvae hatch from the eggs and seek hosts, often the white-footed mouse, from July through September. The larvae are very small and difficult to spot.

Some of the larvae acquire the Lyme disease spirochete while feeding on infected hosts. After engorging, the larvae molt into nymphs, which seek hosts to feed on from April to September. Both the larval and nymphal stages attach to a variety of small mammals, white-footed mice being the main reservoir of the Lyme disease spirochete. Nymphs that were infected as larvae can now transmit spirochetes to their new host. In fact, it is the nymphal stage that appears to be responsible for nearly 90% of the Lyme disease cases in people. This stage is also very small (about the size of a poppy seed). Their bite is painless so most people do not know they have been bitten. The nymphs molt into adult ticks and the process starts all over. The entire life cycle requires three separate hosts and takes about two years to complete.

Spread primarily by wildlife, infected ticks have been found on 29 species of mammals including deer, mice, rabbits, chipmunks, squirrels, raccoons, opossum, and fox. Infected ticks have also been found on over 49 different species of birds. Indeed, birds may be the primary means by which the ticks are spread from one area to another. The tick prefers deer for reproduction, but will utilize other animals when few deer are present.

The lone star tick, a common southern species, as well as several other Ixodes ticks can transmit the disease.

LYME DISEASE IN DOMESTIC ANIMALS

Lyme disease has been diagnosed in dogs, cats, horses, and cows. Symptoms include loss of appetite, soreness, and lameness, often with fever (102.5 to 106 degrees F), swollen glands, and joints. Heart, kidney, liver, eye and nervous system problems can develop. Laminitis is reported in horses and cows, as are poor fertility, abortions, and chronic weight loss.

Temperament changes have been reported in dogs and horses. Untreated animals can develop chronic progressive arthritis.

If you travel into tick infested areas with your animals, it is possible to bring ticks home on the animals that will infest your premises. If animals in your area develop Lyme disease it should alert you that you are also at risk.

WHERE TO FIND TICKS ON ANIMALS

Ticks are most commonly found on the front parts (head, neck, chest), between the toes, on or in the ears, and inside the front and back legs where the leg meets the body (armpit or groin areas). Because the ticks are so small, you must look very carefully. Remove any ticks found and save for identification.

TICK CONTROL ON ANIMALS

To protect animals from infection and to keep them from bringing ticks home requires regular use of tick repellent and control products plus daily examination for ticks.

Veterinary assistance is important in selecting safe tick control products and designing a control program.

HOW TO AVOID TICK BITES

When out of doors several precautions can minimize your chances of being bitten.

- Tuck your pants leg into your socks and your shirt into your pants. The ticks grab onto feet and legs and then climb up. This precaution will help keep them outside your clothes where they can be picked off.

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- Wear light colored clothing. Dark ticks are more easily spotted against a light background.
- Inspect clothes often for ticks. Have a companion inspect your back.
- Apply repellents according to label instructions. Applying directly to clothing appears to be most effective.
- Inspect you body thoroughly when you get in from the field. Especially check groin, navel, armpits, head and behind knees and ears. Have a companion inspect your back, or use a mirror.
- Inspect children at least once daily for ticks. When in heavily infested areas inspect children every three to fou hours.
- When hiking stay in the middle of trails. Do not bushwhack.
- When working outdoors do not wear work clothes home. Wash work clothes often or put them in the dryer to kill any ticks on them by drying.

WHAT TO DO IF BITTEN BY A TICK

Remove the tick as soon as possible. The easiest method is to grasp the tick with fine tweezers, as near the skin as you can, and gently pull straight out. Since the Lyme bacteria is injected ny the tick when it bites, you nust be careful not to squeeze the tick when removing it whcih could result in more bacteria being injected. Do NOT attempt to remove with lighted cigarettes, matches, nail polish, or vaseline.

Once removed put the tick in a small jar containing alcohol (rubbing alcohol will do) and save for identification. Idenification becomes very important if you develop disease symptoms.

IDENTIFICATION OF TICKS

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In most areas, ticks can be submitted for identification through local or state health department offices. Many physicians and veterinarians will also submit ticks.

When submitting a tick put it in a tightly closed container with a small amount of alcohol. Mark it with your name, address, and phone number, date collected, host collected from (animal or man) and recent travel history.

NOTES

Lyme disease and pregnancy: Miscarriage, premature births, and still births have been reported. Transplacental infection of the fetus has occurred. Transmission through breast milk is thought to occur. Any women suspecting exposure must tell her obstetrician and later, her pediatrician.

Blood tests: may be helpful as an aid in diagnosis but are not always reliable. It is possible to have a negative test during the course of the disease or following antibiotic therapy and still have active disease. The diagnosis of Lyme disease must generally be made on the basis of clinical signs and by ruling out other possible diseases. A negative test following treatment does not indicate cure.

IF UNDIAGNOSED, LYME DISEASE CAN BE EXTREMELY DEVASTATING PHYSICALLY, MENTALLY, AND FINANCIALLY.

FOR ADDITIONAL INFORMATION

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